Application No. 10/082,593
AKIRA HAMAMATSU *et al.*
Reply to Office Action of March 21, 2007

PATENT

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method for inspecting semiconductor devices comprising:

receiving a product name of a semiconductor device to be inspected and a process name that identifies a process by which the semiconductor device is to be inspected;

accessing a design database to down load <u>data required for preliminary preparation of inspection of the semiconductor device</u> ~~design information~~ associated with the semiconductor device, wherein the <u>data required for the preliminary preparation of the inspection of the semiconductor device</u> ~~design information~~ is identified using the received product name and the received process name;

processing the down loaded <u>data required for the preliminary preparation of the inspection of the semiconductor device</u> ~~design information~~ to set temporary inspection conditions, wherein the temporary inspection conditions comprise at least one of an inspection area of the semiconductor device, an alignment pattern of the semiconductor device, a spacial filter associated with the semiconductor device, or an area of the semiconductor device to be excluded;

executing a trial inspection of the semiconductor device to detect defects~~, wherein the trial inspection is executed using the set temporary inspection conditions~~;

classifying the detected defects according to whether the defect is on an optically transparent film;

revising the temporary inspection conditions using data obtained by the executed trial inspection; and

inspecting another semiconductor device using the revised temporary inspection conditions.

Application No. 10/082,593
AKIRA HAMAMATSU *et al.*
Reply to Office Action of March 21, 2007

PATENT

wherein the processing is performed before the semiconductor device to be inspected arrives at a location for the trial inspection and the temporary conditions are set without referencing the semiconductor device to be inspected.

2.   (Currently amended) The method for inspecting semiconductor devices according to claim 1, wherein one of the temporary inspection conditions identifies the inspection area of the semiconductor device as an area in which a false alarm ~~an inaccurately detected defect~~ is likely to occur.

3.   (Canceled)

4.   (Currently amended) A method for inspecting semiconductor devices comprising:

receiving a product name of a semiconductor device to be inspected and a process name that identifies a process by which the semiconductor device is to be inspected;

accessing a design database to down load data required for preliminary preparation of inspection of the semiconductor device ~~design information~~ associated with the semiconductor device, wherein the data required for the preliminary preparation of the inspection of the semiconductor device ~~design information~~ is identified using the received product name and the received process name;

processing the down loaded data required for the preliminary preparation of the inspection of the semiconductor device ~~design information~~ to set temporary inspection conditions, wherein the temporary inspection conditions comprise at least one of an inspection area of the semiconductor device, an alignment pattern of the semiconductor device, a special filter associated with the semiconductor device, or an area of the semiconductor device to be excluded;

executing a trial inspection of the semiconductor device to detect defects~~, wherein the trial inspection is executed using the set temporary inspection conditions~~;

Application No. 10/082,593
AKIRA HAMAMATSU *et al.*
Reply to Office Action of March 21, 2007

PATENT

classifying the detected defects according to whether the defect is on an optically transparent film; and

outputting results of the executed trial inspection, wherein the results include information on whether the detected defect is on an optically transparent film,

wherein the processing is performed before the semiconductor device to be inspected arrives at a location for the trial inspection and the temporary conditions are set without referencing the semiconductor device to be inspected.

5.   (Currently amended) The method for inspecting semiconductor devices according to claim 4, wherein one of the temporary inspection conditions identifies the inspection area of the semiconductor device as an area in which a false alarm an-inaccurately detected defect is likely to occur.

6.   (Currently amended) The method for inspecting semiconductor devices according to claim 4, further comprising revising the set temporary inspection conditions so that only actual foreign matter on the semiconductor device is detected as a defect or a false alarm an inaccurately-detected-defect is less than a preset amount.

7.   (Currently amended) A method for inspecting semiconductor devices comprising:

receiving a product name of a semiconductor device and a process name that identifies a process by which the semiconductor device is to be inspected;

accessing a design database to down load data required for preliminary preparation of inspection of the semiconductor device design information associated with the semiconductor device, wherein the data required for the preliminary preparation of the inspection of the semiconductor device design-information is identified using the received product name and the received process name;

processing the down loaded data required for the preliminary preparation of the inspection of the semiconductor device design-information to set temporary inspection

Application No. 10/082,593   PATENT
AKIRA HAMAMATSU *et al.*
Reply to Office Action of March 21, 2007

conditions, wherein the temporary inspection conditions comprise at least one of an inspection area of the semiconductor device, an alignment pattern of the semiconductor device, a spacial filter associated with the semiconductor device, or an area of the semiconductor device to be excluded;

       executing a trial inspection of the semiconductor device to detect defects, wherein the trial inspection is executed using an optical inspection tool that is configured to execute the trial inspection based on the set temporary inspection conditions;

       classifying the detected defects according to whether the defect is on an optically transparent film; and

       outputting a result of the executed trial inspection, wherein the result identifies whether the detected defect can be reviewed by a scanning electron microscope,

       wherein the processing is performed before the semiconductor device to be inspected arrives at a location for the trial inspection and the temporary conditions are set without referencing the semiconductor device to be inspected.

8.   (Previously presented) The method for inspecting semiconductor devices according to claim 7, wherein images of the detected defects are displayed on a screen.

9.   (Canceled)

10.   (Previously presented) The method for inspecting semiconductor devices according to claim 7, further comprising revising the set temporary inspection conditions based on the classification of the detected defects.

11-13. (Canceled)

14.   (Currently amended) A method for inspecting a semiconductor device comprising:

       receiving a product name of a semiconductor device to be detected and a process name that identifies a process by which the semiconductor device is to be inspected;

Application No. 10/082,593   PATENT
AKIRA HAMAMATSU *et al.*
Reply to Office Action of March 21, 2007

accessing a design database to down load <u>data required for preliminary</u>
<u>preparation of inspection of the semiconductor device</u> ~~design information~~ associated with the
semiconductor device, wherein the <u>data required for the preliminary preparation of the inspection</u>
<u>of the semiconductor device</u> ~~design information~~ is identified using the received product name
and the received process name;

processing the down loaded <u>data required for the preliminary preparation of the</u>
<u>inspection of the semiconductor device</u> ~~design information~~ to set temporary inspection
conditions, wherein the temporary inspection conditions comprise at least one of an inspection
area of the semiconductor device, an alignment pattern of the semiconductor device, a spacial
filter associated with the semiconductor device, or an area of the semiconductor device to be
excluded;

executing a trial inspection of the semiconductor device to detect defects, ~~wherein~~
~~the trial inspection is executed using an optical inspection tool that is configured to execute the~~
~~trial inspection based on the set temporary inspection conditions~~; and

classifying the detected defects according to whether the defect is on an optically
transparent film<u>,</u>

<u>wherein the processing is performed before the semiconductor device to be</u>
<u>inspected arrives at a location for the trial inspection and the temporary conditions are set</u>
<u>without referencing the semiconductor device to be inspected</u>.

15.   (Previously presented) The method of claim 14 further comprising
revising the set temporary inspection conditions.

16-20. (Canceled)